

## IV. Remarks.

The Examiner entered the following rejections.

1. Claims 1, 2 and 4-7, 13-14, 16, 17, 28 and 31 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al (WO 99/43598) in view of Chen et al. (US 5,837,085).

A rejection based on 35 U.S.C. § 103 must rest on a factual basis, with the facts being interpreted without a hindsight reconstruction of the invention from the prior art. Thus, in the context of an analysis under § 103, it is not sufficient merely to identify one reference that teaches several of the limitations of a claim and another that teaches several limitations of a claim to support a rejection based on obviousness. This is because obviousness is not established by combining the basic disclosures of the prior art to produce the claimed invention absent a teaching or suggestion that the combination be made. Interconnect Planning Corp. v. Fiel, 774 F.2d 1132, 1143, 227 U.S.P.Q. (BNA) 543, 551 (Fed. Cir. 1985); In Re Corkhill, 771 F.2d 1496, 1501-02, 226 U.S.P.Q. (BNA) 1005, 1009-10 (Fed. Cir. 1985). The relevant analysis invokes a cornerstone principle of patent law:

That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is . . . simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. Environmental Designs v. Union Oil Co. of Cal., 713 F.2d 693, 698 (Fed. Cir. 1983) (other citations omitted).

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A patentable invention . . . may result even if the inventor has, in effect, merely combined features, old in the art, for their known purpose without producing anything beyond the results inherent in their use. American Hoist & Derek Co. v. Sowa & Sons, Inc., 220 U.S.P.Q. (BNA) 763, 771 (Fed. Cir. 1984) (emphasis in original, other citations omitted).

As the Court of Appeals for the Federal Circuit recently noted, “[w]hen a rejection depends upon a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references.” Ecolchem, Inc. v. Southern Calif. Edison, 56 U.S.P.Q. 2d 1065, 1073 (Fed. Cir. 2000). There must be a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). This is because “combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability.” Id. Accordingly, to establish a rejection under 35 U.S.C. § 103, a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but also some motivation to combine the prior art teachings in the particular manner claimed. See,

e.g., In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000). In other words, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

None of the references teaches all of the limitations contained in independent claims 1, 13 and 28, namely, "the ribbed profile having a rib with an angle of approximately 90°".

Contrary to the Examiner's argument, Chen makes no mention of a *rib angle* at all. There is no mention of rib angle for two reasons, first, teeth are not analogous to ribs and, second, the specification is silent as to any tooth dimension or characteristic. A close reading of Chen reveals that it only teaches a method of "making a toothed belt having a precise tooth shape in a continuous and speedy way", col. 2, lines 44-46 (emphasis added). Chen Fig. 5 confirms this description by showing a toothed belt on a cylindrical mold 11. However, the figure only shows simple flat sided teeth 13. No part of the Chen specification or figures gives any information concerning the shape or form of the teeth.

As to the difference between ribs and teeth, ribs run in a longitudinal (endless) direction on the belt, see for example Fig. 3 of US 4981462 which shows ribs (38) as compared to Fig. 4 of US 61387999 which shows teeth (42). Teeth extend transversely to the belt endless direction. In other words, teeth are disposed at 90° to ribs. Ribbed belts and toothed belts are not interchangeable, and the one cannot be made to operate in a system, pulley or sprocket designed for the other. Hence, there is no incentive to combine Adifon with Chen since a toothed belt (Chen) is in no way compatible with a ribbed design.<sup>1</sup>

Of course, it is well established that Adifon makes no mention of ribs either, instead only teaching flat ropes (16). The disclosed flat ropes do not comprise nor teach nor reasonably suggest ribs. Ribs are simply not present. No combination of Adifon with Chen will produce a rib or by extension a rib angle as claimed.

As noted in the argument dated August 30, 2006, the claimed rib angle represents an increase in torque and load carrying capacity. It results in other desirable effects as well, namely, low noise for lift systems. The inventive belt provides these benefits in a lesser width, thereby saving space and pulley width, each representing a cost savings over the prior art systems as well.

As noted on page 5, lines 6-20 of the application:

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<sup>1</sup> Further, no mention is made in Chen of *any* angle, including "rib angle" as claimed.

"In the case of an approximate 90° rib angle, **angle  $\alpha$  increases a pulley engaging surface area by a factor of approximately  $\sqrt{2}$ .** Increasing the belt surface engaging a pulley in this manner **increases the torque** which can be transmitted by a lift pulley. This in turn **increases the load capacity** of a lift system. Put another way, for a given load and torque **the inventive belt will have a lesser width  $w$  than a prior art flat belt.** This, in turn, results in a system with a reduced space requirement as compared to a prior art flat belt system.

Use of the ribs also has the desirable effect of **decreasing an operating noise level** as the belt engages each pulley. The use of a grooved pulley with the inventive belt also eliminates the need for a rubber coating on the pulley."

To date over 10 references have been presented in this case in support of various 102 and 103 rejections, and yet none teaches the claimed rib angle alone or in combination. This is because each belt is engineered to solve a particular problem with a set of disclosed characteristics. In this case the novel use of 90° ribs patentably achieves enhanced torque and load capacity with reduced width and noise.

Claims 2, 4-7 depend from claim 1.

Claims 14, 16, 17 depend from claim 13.

Claim 31 depends from claim 28.

Applicant requests this rejection be withdrawn in its entirety.

2. Claim 7 is rejected under 35 USC 103(a) as being unpatentable over Adifon et al and Chen et al, as applied to claim 3 and 15, respectively, and in further view of White, Jr. et al (US 4,981,462).

Claim 7 depends from claim 1.

3. Claims 3, 15, 18, 21-22, 26 and 30 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al in view of Chen et al, as applied to claims 2 and 14 and 28, and in further view of Suhling (DE 3,934,654) and Siefert (US 3,662,596).

Claim 3 depends from claim 1.

Claims 15, 18, 21-22 depend from claim 13.

Claim 30 depends from claim 28.

As to claim 26, please see the argument for #1 above as to Adifon and Chen with respect to ribs and rib angle. As to Suhling and Seifert, Seifert only teaches a strain gage (11) in a tire cord and Suhling only teaches a current source (14). Neither cures the absence of the rib or rib angle suffered by Adifon and Chen. Hence, the proposed combination does not support the 103 (a) rejection and withdrawal is requested.

4. Claim 19 is rejected under 35 USC 103(a) as being unpatentable over Adifon et al over Chen et al, Suhling and Seifert, as applied to claim 15, and in further view of White, Jr. et al.

Claim 19 depends from claim 13.

5. Claim 20 is rejected under 35 USC 103(a) as being unpatentable over Adifon et al over Chen et al, Suhling and Seifert and White, Jr. et al as applied to claim 19, and in further view of Stork (US 3,948,113).

Claim 20 depends from claim 13.

6. Claims 8-10 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al over Chen et al and White et al, as applied to claims 7 and 33, and in further view of Stork.

Claims 8-10 depend from claim 1.

7. Claims 11 and 23 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al in view of Chen et al, as applied to claim 1, and in further view of Siefert.

Claim 11 depends from claim 1.

Claim 23 depends from claim 13.

8. Claims 12 and 24 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al in view of Chen et al, as applied to claims 1 and 13, and in further view of Suhling.

Claim 12 depends from claim 1.

Claim 24 depends from claim 13.

9. Claims 25, 33-34 and 36-37 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al in view of Chen et al, as applied to claims 1 and 13, and in further view of Stork.

Claim 25 depends from claim 1.

Claims 33, 36 depend from claim 1.

Claims 34, 37 depend from claim 13.

10. Claims 35 and 38 are rejected under 35 USC 103(a) as being unpatentable over Adifon et al in view of Chen et al, Suhling and Seifert, as applied to claim 26, and in further view of Stork.

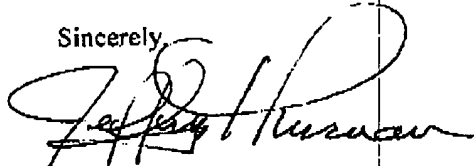
Claims 35, 38 depend from claim 26.

V. Fees

Any fees payable for this response may be deducted from deposit account 07-0475 in the name of The Gates Corporation.

Thank you for your attention to this case.

Sincerely,



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